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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,433	11/29/2000	Kuniyuki Kajita	L9289.00121	9782
7590	04/20/2005			
Stevens Davis Miller & Mosher Suite 850 1615 L Street NW Washington, DC 20036			EXAMINER CHUNG, PHUNG M	
			ART UNIT. 2133	PAPER NUMBER

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,433

Applicant(s)

KAJITA, KUNIYUKI

Examiner

Phung My Chung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-13, 19-25 and 31-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-13, 19-25 and 31-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-13, 19, 21-25, 31, 33-34, 36, 38, 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al (6,199,186) in view of Frenger et al. ("Rate Matching in Multi-Channel Systems using RCPC-Codes" 1997, IEEE, pgs. (354-357)).

As per claims 11-13, 21-22, 36 and 38, Chen et al disclose the invention substantially as claimed, comprising: a coder that performs error correction coding of input data including a plurality of bits;

An interleaver that performs interleaving of the bits coded by the coder.
(See col. 4, lines 6-24).

Chen et al do not disclose a rate matcher that comprises a repeater and a puncturer, wherein the rate matcher alternatively selects between (i) employing the repeater to repeat a part of the bits interleaved by the interleaver and (ii) employing the puncturer to puncture a part of the bits interleaved by the interleaver. However, Frenger et al disclose a rate matcher that comprises a repeater and a puncturer. (See col. 2, section II. RCPC-Codes for Rate Matching, pg. 354). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the

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rate matching including a repeater and a puncturer as taught by Frenger et al into the invention of Chen et al to repeat or puncture a part of the bits interleaved by the interleaver to provide flexible and efficient method for source data rate matching.

As per claim 19, this method claim is also rejected under the same rationale as set forth in system claim 11.

As per claims 23-25, 33-34, 41 and 43, these claims are also rejected under the same rationale as set forth in claims 11-13, 21-22, 36 and 38.

As per claim 31, this method claim is also rejected under the same rationale as set forth in claim 19.

3. Claims 20, 32, 35, 37, 39-40, 42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al (6,199,186) in view of Frenger et al. ("Rate Matching in Multi-Channel Systems using RCPC-Codes" 1997, IEEE, pgs. (354-357) as applied to claims 11 and 19 above, and further in view of the application admitted prior art.

As per claim 20, the teaching of Chen et al and Frenger et al have been discussed above. They do not disclose the steps of:

Employing a second rate matcher that comprises a second repeater and a second puncturer to alternatively select between second repeater and second puncturer...; and

Performing deinterleaving of data including bits provided by the second rate matcher.

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However, the admitted prior art does teach the steps of employing a second rate matcher that comprises a second repeater and a second puncturer to alternatively select between second repeater and second puncturer...; and

Performing deinterleaving of data including bits provided by the second rate matcher. (See pgs. 1-4 and Figs. 1(a)-1(b)). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the steps of: employing a second rate matcher that comprises a second repeater and a second puncturer to alternatively select between second repeater and second puncturer to alternatively select between second repeater and second puncturer...; and performing deinterleaving of data including bits proded by the second rate matcher as taught by the admitted prior art into the invention of Chen et al and Frenger et al in order for adjusting coded data to frame length.

As per claims 32, 35, 37, 39-40, 42 and 44, these claims are also rejected under the same rationale as set forth in claim 20.

4. Drawings are objected to because:

The replacement sheet (2/11) dated on 1/26/05, "Fig. 2 Prior Art" is not excepted by examiner. This is because the contents of it is not of the original Fig. 2.

5. Applicant's arguments with respect to claims 11-13, 19-25 and 31-44 have been considered but are moot in view of the new ground(s) of rejection.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.**

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See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung My Chung whose telephone number is 571-272-3818. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on 571-272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phung My Chung
Primary Patent Examiner
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